

**REMARKS**

Claims 1, 5, 7, 17, 18, 36 and 38 are pending in the current application. Claim 1 is the sole independent claim. No new matter is added. In view of the following remarks, favorable reconsideration and withdrawal of the rejection is respectfully requested.

**35 U.S.C. § 103(a) REJECTION – MARTIN AND ARIYOSHI**

Claims 1, 5, 7, 17, 18, 36 and 38 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Martin, U.S. Patent No. 5,796,848 in view of Ariyoshi, U.S. Patent No. 5,212,764. Applicants traverse.

In an attempt to recreate the limitations of independent claim 1, the Examiner applies Ariyoshi to teach the deficiencies of Martin. The Examiner asserts “Ariyoshi discloses an audio device (FIG. 1) with a transducer pre-amplifier and sigma delta modulator including a filter means (band pass filter 13) in the signal path between the pre-amplifier (11) and the sigma-delta modulator (13) to prevent low frequency components from reaching the sigma-delta modulator.” Action, p. 3. Applicant disagrees.

Ariyoshi fails to disclose a filter for preventing low frequency components. Ariyoshi discloses “[t]he bandpass filter 13 consists of a 15-channel filter bank, which is composed of bandpass filters (BPF) 13-a1 through 13-a15, full-wave rectifiers (RECT) 13-b1 through 13-b15 and lowpass filters (LPF) 13-c1 through 13-c15. The characteristics of the band-pass filters (BPF) 13-a1 through 13-a15 are such that  $Q = 6$ , and the center frequencies thereof are as follows:  $f_{01} = 250$ ,  $f_{02} = 315 \dots f_{15} = 6350$ .” Ariyoshi, col. 8, line 67 - col. 9, line 9. Thus, Ariyoshi teaches passing frequencies in the center band, ranging from 250-6350 Hz, of BPF bank 13. Ariyoshi fails to disclose a high pass filter passing frequencies in the lowest band of BPF bank 13. In addition, Ariyoshi discloses an A/D converter 14, not a sigma-delta type of A/D converter.

Furthermore, Ariyoshi and Martin are directed to two completely different technical problems. As discussed in Applicants' previous Amendment, Martin discloses a digital hearing aid which solves the problem of suppressing penetration of external high frequency electromagnetic waves. Ariyoshi discloses a noise eliminating apparatus which eliminates components of background noise (*e.g.*, in vehicles, offices, homes or factories) contained in a speech signal from a speech input to a speech recognition apparatus.

Additionally, Ariyoshi is silent regarding any specific benefits (*e.g.*, to avoid fluctuating DC bias voltages or low-frequency signals of the preamplifier induces tonal artifacts into a sigma-delta modulator). As such, there is no motivation for one of ordinary skill in the art to make the alleged combination.

Applicant would like to remind the Examiner, as stated in *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998) (emphasis added);

This Court has explained the purpose of the motivation to combine requirement: to prevent the use of hindsight based on the invention to defeat the patentability of the invention, this Court requires the [challenger] to show a motivation to combine the references that create the case of obviousness. In other words, the [challenger] must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the matter claimed.

This Court has identified three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art.

Similar requirements were set forth in *In re Dembiczak*, 50 USPQ2d 1614 (Fed. Cir. 1999). Thus, evidence of a suggestion, teaching or motivation to combine may originate from 1) the prior art references themselves, 2) the knowledge of one of ordinary skill in the art, or in some cases, 3) from the nature of the problem to be solved.

Therefore, the Examiner's assertion that "...it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a filter means in the signal path between the pre-amplifier and the sigma-delta modulator to prevent low frequency components from reaching the sigma-delta modulator in order to pass only desired signal components to the sigma-delta modulator (A/D converter) for more efficient processing by filtering out undesired signals" is not evidence for an obviousness rejection. The Examiner must particularly point out and distinctly claim some teaching in the prior art references that would motivate one of ordinary skill in the art to make the alleged combination. Absent such teaching, the rejection should be withdrawn.

Thus, the combination of Martin in view of Ariyoshi fails to teach or suggest "a sigma-delta modulator for providing digital audio signals, wherein the microphone assembly further comprises filter means in the signal path between the pre-amplifier and the sigma-delta modulator, the filter means preventing low frequency components from reaching the sigma-delta modulator" as recited in independent claim 1.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection to independent claim 1.

Reconsideration and withdrawal of the rejection to claims 5, 7, 17, 18, 36 and 38, at least by virtue of their dependency on independent claim 1, is requested.

### **CONCLUSION**

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of the present application is earnestly solicited.

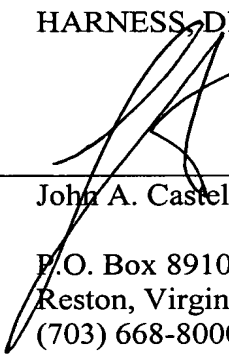
Should there be any outstanding matters that need to be resolved in the present application; the Examiner is respectfully requested to contact John A. Castellano at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNES DICKY, & PIERCE, P.L.C.

By

  
John A. Castellano, Reg. No. 35,094

P.O. Box 8910  
Reston, Virginia 20195  
(703) 668-8000

JAC/CDW:psy